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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/771,611	02/04/2004	Tyler J. Gomm	303.816US2	3437
21186	7590	04/05/2006	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH 121 S. 8TH STREET SUITE 1600 MINNEAPOLIS, MN 55402			COX, CASSANDRA F	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/771,611

Applicant(s)

GOMM ET AL.

Examiner

Cassandra Cox

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-29 and 31-36 is/are allowed.
- 6) ☒ Claim(s) 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/23/06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

The rejections with respect to claims 1, 5-7, 9, 15, 19-25, 27-29, and 31-36 have been overcome.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ooishi (U.S. Patent No. 6,421,789) in view of Matsuzaki (U.S. Patent No. 6,088,255).

In reference to claim 30, Ooishi discloses in Figure 1 a method comprising providing an external signal (CLK) to a memory device; providing a plurality of row address signals (A0, A1) to the memory device; providing a plurality of column address signals (A11, A12) to the memory device; accessing data in a memory array (MA) of the memory device based on the row address signals and the column address signals; and transferring the data from the memory array (MA) to an output data path (P13, 22, G-I/O) (see column 7, line 63 through column 8, line 5) based on the internal signal (CLK(in)). Ooishi does not disclose that the circuit (30) periodically performs a measurement at a measuring frequency. Matsuzaki discloses in Figure 15 a method for periodically performing a measurement at a measuring frequency on the measuring path (see column 23, line 39-54) to synchronize the external (CLK1) and internal signals (OUT), wherein a frequency of the external signal (CLK1) is greater than the measuring

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frequency (see Figures 17-18), wherein periodically performing the measurement includes starting the measurement based on an edge of a start signal (START) having a cycle time greater than the cycle time of the external signal, and wherein periodically performing the measurement includes stopping the measurement based on an edge of a stop signal (STOP), the stop signal being shifted from the start signal by at least one cycle of the external signal (CLK1) (see Figures 17A, 18C, 18D). Since Ooishi does not disclose the particulars of the circuit (DLL 30) that generates the internal signal (CLK(in) that is equivalent to the internal signal (OUT) of Matsuzaki), it would have been obvious to one skilled in the art at the time of the invention that any DLL circuit capable of generating an internal signal based on an external signal could be used to control the transfer of the data in the circuit of Ooishi and the circuit (Figure 15) of Matsuzaki discloses an example of such a circuit providing the benefit of setting the corrected delay in a short time.

Allowable Subject Matter

3. Claims 1-29 and 31-36 are allowed.
4. The following is an examiner's statement of reasons for allowance: Claims 1, 5-7, 9, 15, 19-25, 27-29 are allowed because the closest prior art of record fails to disclose a circuit as shown in Figure 7 wherein the interval controller (124) includes a frequency modifier (710) in combination with the rest of the limitations of the base claims and any intervening claims. Claims 2-4, 8, and 16-18 are allowed because the closest prior art of record fails to disclose a circuit as shown in Figure 7 which includes a frequency modifier (710) for setting the time interval between one measurement and the next

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measurement to be unequal to a cycle time of the external signal (XCLK) in combination with the rest of the limitations of the base claims and any intervening claims. Claims 10-14 are allowed because the closest prior art of record fails to disclose a circuit as shown in Figure 7 which includes a frequency divider (710) located on the first path for dividing a frequency of the external signal (CLKIN) to control a frequency of the measurement such that the frequency of the measurement is unequal to the frequency of the external signal (CLKIN) in combination with the rest of the limitations of the base claims and any intervening claims. Claim 26 is allowed because the closest prior art of record fails to disclose a circuit as shown in Figure 1 wherein producing the reference time (T_{REF}) includes subtracting the model delay time (T_{DL}) from at least one cycle time of the external signal (MT_{CK}) in combination with the rest of the limitations of the base claims and any intervening claims. Claim 31 is allowed because the closest prior art of record fails to disclose a circuit as shown in Figure 7 wherein the method includes dividing a frequency of the external signal (CLKIN) to produce a start signal (START) in combination with the rest of the limitations of the base claims and any intervening claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cassandra Cox whose telephone number is 571-272-1741. The examiner can normally be reached on Monday-Thursday from 7:00 AM to 4:30 PM and on alternate Fridays from 7:30AM to 4:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CC

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April 2, 2006


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800